

**WHAT IS CLAIMED IS:**

1. A cosmetic composition for treating keratin fibers comprising:
  - at least one branched sulphonic polyester; and
  - at least one conditioning agent chosen from non-volatile silicones, cationic and amphoteric polymers and cationic and amphiphilic surfactants.
2. The composition of Claim 1, wherein said keratin fibers are human keratin fibers.
3. The composition of Claim 2, wherein said human keratin fibers are hair.
4. The composition of Claim 1, wherein said at least one branched sulphonic polyester is formed by polymerizing:
  - at least one difunctional dicarboxylic acid having no sulphonic functional groups;
  - at least one difunctional monomer having at least one sulphonic functional group, wherein said at least one functional group is chosen from hydroxyl, carboxyl and amino groups;
  - at least one diol or a mixture of at least one diol and at least one diamine; and
  - at least one multifunctional reagent having at least three functional groups chosen from amino, alcohol and carboxylic acid groups.
5. The composition of Claim 4, wherein the mixture polymerized further includes

- at least one difunctional monomer chosen from hydroxycarboxylic acids and aminocarboxylic acids.

6. The composition of Claim 5, wherein said polymerization utilizes 2 to 15 mol% of said at least one difunctional monomer having at least one sulphonic function;

0 to 40 mol% of said at least one difunctional monomer chosen from hydroxycarboxylic acids and aminocarboxylic acids; and

0.1 to 40 mol% of said at least one multifunctional reagent bearing at least three reactive functional groups.

7. The composition of Claim 4, wherein said polymer contains substantially equal proportions, in terms of number of equivalents, of carboxylic acid groups and of diol or diol and diamine groups.

8. The composition of Claim 4, wherein said at least one difunctional dicarboxylic acid having no sulphonic functional groups is chosen from aliphatic dicarboxylic acids, alicyclic dicarboxylic acids, and aromatic dicarboxylic acids.

9. The composition of Claim 8, wherein said at least one difunctional dicarboxylic acid having no sulphonic functional groups is chosen from 1,4-cyclohexanedioic acid, succinic acid, glutaric acid, adipic acid, azelaic acid, sebacic acid, fumaric acid, maleic acid, 1,3-cyclohexanedioic acid, phthalic acid, terephthalic acid, and isophthalic acid.

10. The composition of Claim 4, wherein said at least one difunctional monomer having at least one sulphonic functional group is chosen from dicarboxylic acids, dicarboxylic acid esters, glycols and hydroxy acids each containing at least one metal sulphonate group.

11. The composition of Claim 4, wherein said at least one diol is chosen from alkanediols and polyalkylenediols.

12. The composition of Claim 11, wherein said at least one diol is chosen from ethylene glycol, propylene glycol, diethylene glycol, triethylene glycol and polypropylene glycol.

13. The composition of Claim 4, wherein said at least one diamine is chosen from alkanediamines and polyalkylenediamines.

14. The composition of Claim 4, wherein said at least one multifunctional reagent is chosen from trimethylolethane, trimethylolpropane, glycerol, pentaerythritol, sorbitol, trimellitic anhydride, erythritol, threitol, dipentaerythritol, pyromellitic dianhydride and dimethylpropionic acid.

15. The composition of Claim 1, wherein said at least one branched sulphonic polyester is present in amount ranging from 0.01 to 40% by weight relative to the total weight of the composition.

16. The composition of Claim 15, wherein said at least one branched sulphonic polyester is present in amount ranging from 0.1 to 16% by weight relative to

the total weight of the composition.

17. The composition of Claim 16, wherein said at least one branched sulphonic polyester is present in amount ranging from 0.5 to 4% by weight relative to the total weight of the composition.

18. The composition of Claim 1, wherein said at least one branched sulphonic polyester is in dissolved form or in the form of a dispersion of solid particles.

19. The composition of Claim 1, wherein said at least one conditioning agent is insoluble and is chosen from poly- $\alpha$ -olefins, fluoro oils, plant oils, natural waxes, fluoro waxes, fluoro gums, fatty acid esters, insoluble silicones and amide compounds comprising at least one fatty chain.

20. The composition of Claim 1, wherein said cationic and amphoteric polymers are chosen from

cationic cellulose derivatives,

dimethyldiallylammonium halide homopolymers,

dimethyldiallylammonium halide copolymers,

polyquaternary ammonium polymers,

vinylpyrrolidone copolymers containing cationic units, and

cationic polysiloxanes.

21. The composition of Claim 1, wherein said cationic polymers are chosen from

quaternary cellulose ether derivatives,  
copolymers of cellulose with a water-soluble quaternary ammonium monomer,  
cyclopolymers,  
cationic polysaccharides,  
cationic silicone polymers,  
quaternized and non-quaternized vinylpyrrolidone/dialkylaminoalkyl acrylate and  
methacrylate copolymers,  
quaternary polymers of vinylpyrrolidone and of vinylimidazole, and  
polyamidoamines.

22. The composition of Claim 1, wherein said cationic surfactants are water-insoluble and are chosen from fatty amines and salts thereof.

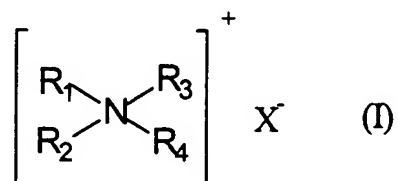
23. The composition of Claim 1, wherein said cationic surfactants are water-insoluble and are chosen from quaternary ammonium salts.

24. The composition of Claim 22, wherein said fatty amines are chosen from  
dioctylamine,  
stearyldimethylamine,  
palmityldimethylamine,  
oleocetyldimethylamine and  
amidoamines.

25. The composition of Claim 24, wherein said amidoamines are chosen from  
stearylamidoethyldiethylamine, behenylamidopropyldimethylamine, stearylamidopropyl-

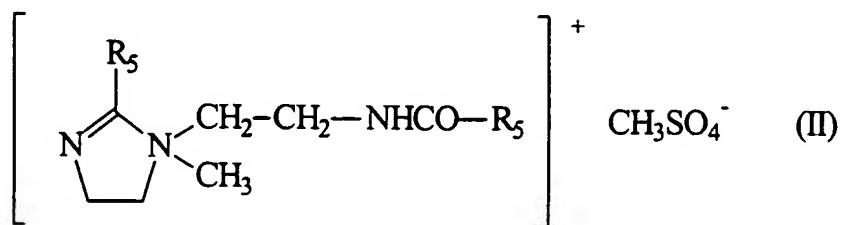
dimethylamine, oleylamidopropyldimethylamine and stearylamilidoethyldimethylamine.

26. The composition of Claim 23, wherein said cationic surfactants have the following formula (I):



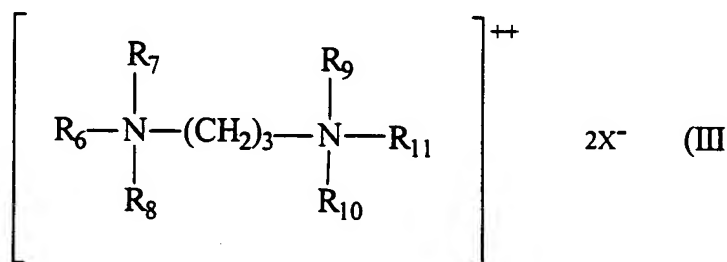
in which  $R_1$  to  $R_4$ , which may be identical or different, are chosen from aliphatic radicals comprising from 1 to 22 carbon atoms and aromatic, alkoxy, polyoxyalkylene, alkylamide, hydroxyalkyl, aryl and alkylaryl radicals comprising from 12 to 22 carbon atoms; and X is an anion chosen from halides, phosphates, acetates, lactates and alkylsulphates.

27. The composition of Claim 23, wherein said cationic surfactants comprise at least two quaternary imidazolinium salts of formula (II) below:



in which  $R_5$  is chosen from alkenyl and alkyl radicals comprising from 13 to 21 carbon atoms and fatty acid derivatives of tallow.

28. The composition of Claim 23, wherein said cationic surfactants have the formula (III):



in which  $R_6$  is chosen from aliphatic radicals comprising from 16 to 22 carbon atoms,  $R_7$ ,  $R_8$ ,  $R_9$ ,  $R_{10}$  and  $R_{11}$  are chosen from hydrogen and alkyl radicals comprising from 1 to 4 carbon atoms, and X is an anion chosen from halides, acetates, phosphates and sulphates.

29. The composition of Claim 1, wherein said composition further comprises at least one cosmetic additive.

30. The composition of Claim 29, wherein said at least one cosmetic additive is chosen from plasticizers and neutralizing agents.

31. The composition of Claim 1, wherein said composition is in the form of a vaporizable composition, a mousse, a gel or a lotion.

32. The composition of Claim 1, wherein said composition further comprises a solvent chosen from water, an alcohol, and an aqueous-alcoholic mixture.

33. The composition of Claim 29, wherein the composition further comprises a suitable amount of at least one propellant.

34. The composition of Claim 33, wherein said at least one propellant is chosen from compressed gas and liquefied gases.

35. The composition of Claim 33, wherein said at least one propellant is chosen from air, carbon dioxide and nitrogen.

36. The composition of Claim 33, wherein said at least one propellant is chosen from a gas which is soluble or insoluble in the composition.

37. The composition of Claim 36, wherein said propellant is chosen from dimethyl ether, fluoro and non-fluoro hydrocarbons.

38. An aerosol device comprising a container containing in a liquid phase an aerosol composition comprising a cosmetic composition in a suitable solvent, a propellant, and a means for dispensing said aerosol composition, wherein said cosmetic composition comprises:

- at least one branched sulphonic polyester; and
- at least one conditioning agent chosen from non-volatile silicones, cationic and amphoteric polymers and cationic and amphiphilic surfactants.

39. The aerosol device of Claim 38, wherein said at least one branched sulphonic polyester is formed by polymerizing:

- at least one difunctional dicarboxylic acid having no sulphonic functional groups;



- at least one difunctional monomer having at least one sulphonic functional group, wherein said at least one functional group is chosen from hydroxyl, carboxyl and amino groups;

- at least one diol or a mixture of at least one diol and at least one diamines; and
- at least one multifunctional reagent having at least three functional groups chosen from amino, alcohol and carboxylic acid groups.

40 The aerosol device of Claim 39, wherein the mixture polymerized further includes

- at least one difunctional monomer chosen from hydroxycarboxylic acids and aminocarboxylic acids.

41. A process for treating keratin fibers comprising applying a cosmetic composition to the fibers, either before or after shaping the hairstyle, wherein said cosmetic composition comprises:

- at least one branched sulphonic polyester; and
- at least one conditioning agent chosen from non-volatile silicones, cationic and amphoteric polymers and cationic and amphiphilic surfactants.

42. The process of Claim 41, wherein said at least one branched sulphonic polyester is formed by polymerizing:

- at least one difunctional dicarboxylic acid having no sulphonic functional groups;

- at least one difunctional monomer having at least one sulphonic functional group, wherein said at least one functional group is chosen from hydroxyl, carboxyl and amino groups;

- at least one diol or a mixture of at least one diol and at least one diamines; and
- at least one multifunctional reagent having at least three functional groups chosen from amino, alcohol and carboxylic acid groups.

43. The process of Claim 42, wherein the mixture polymerized further includes

- at least one difunctional monomer chosen from hydroxycarboxylic acids and aminocarboxylic acids.

44. A method of making a cosmetic styling formulation comprising the step of including in said formulation

- at least one branched sulphonic polyester; and
- at least one conditioning agent chosen from non-volatile silicones, cationic and amphoteric polymers and cationic and amphiphilic surfactants.